Bridging the divide between school and university geography - 'Mind the Gap!'

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Abstract

This chapter discusses the known 'gap' between the curricular content of school and undergraduate geography courses, as well as considering aspects of variation in skills between the two. The first section looks at the popularity of geography in schools, and at degree level, both within the UK and internationally. It draws on global 'reviews' of the state of geography education, including issues of transition from school to university, to provide a comparative perspective across jurisdictions (see Butt and Lambert 2014). The experiences of transition reported by geography students themselves are noted (Baer 2008, Bryson 1997, Marriott 2007, Tate and Swords 2013). Previously the ways in which students have negotiated the perceived gap has been largely overlooked although work has been completed on self-reflection (Bryson 1997), developing transferable skills (Haigh and Kilmartin 1999), and approaches to learning in geography (Maguire et al 2001).

Although attention is given to the impact of recent education policy shifts on the content of geography 'A' (advanced) levels, particularly in England, the approach taken here enables the reader to make some comparisons with educational situations in other jurisdictions. A small case study is provided, highlighting the convergence and divergence of content and skills in schools and universities in England, noting the recent work of the 'A' Level Content Advisory Board (ALCAB). Implications for the effective transfer of students from school to university geography courses are discussed and the perennial issue of the range of geography content taught to pre university students is considered.

Key words: transition, content gap, skills gap, A level, syllabus change, professional development.

Biography

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Chapter 1: Bridging the divide between school and university geography - 'Mind the Gap!'

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<b> Introduction

Across academic subjects, and in different countries, there is a growing appreciation of the importance of understanding how students cope with transition from school to university in terms of adaptation to university life, developing self-identity as university students, gaining greater emotional intelligence with respect to expectations of academic achievement, and coping with new approaches to pedagogy in the academy. Research suggests that students starting their undergraduate geography courses are less concerned about a content gap and more with the range of skills required to study successfully at degree level (Tate and Swords 2013). It is, however, sensible to gain a more complete understanding of the assessment requirements for both content and skills at the point of transition from school to undergraduate study, so as to highlight the implications for future degree level work. Suggestions are made in this chapter about how to overcome transition problems and minimise the impact of the 'gap' between school and university geography content when 'bridging the divide'. The concluding section features a brief discussion of the effects on school teachers and university lecturers of the 'gap' between school and university geography – not least the need for continuing professional development to help educators prepare students for transition. It is acknowledged that teachers and lecturers need to maintain a dialogue to ensure that the impact of the known 'gap' is minimised.

<b>The 'gap'

It is now over a quarter of a century since Andrew Goudie, then President of the Geographical Association in England, expressed his view that 'a chasm has developed between those who teach at school and those who teach in universities' (Goudie, 1993, p. 338). There is little to suggest that this gap has narrowed significantly in recent years, either in England or in other countries in the 'developed' and 'developing' worlds. This issue is persistent, well documented (Clifford, 2002; Thrift, 2002; Bonnett, 2003), and possibly cyclical (Morgan 2002). Despite claims regarding the popularity and positive experiences of students studying geography at schools and universities (Butt, 2008, 2011) there is a noticeable disjuncture between geographical themes and content between the two. Such differences may be regarded as both expected and predictable, given the contrasting aims and expectations of geography education in schools and universities. As asserted by Butt and Collins (2018), it would perhaps be surprising if geography in the two sectors were closely aligned, for:

> 'They are different, with different priorities and different purposes. We should perhaps *expect* a 'gap'?' (p.263).

The impacts, although these may impose more on one sector than the other, are often shared – for example, a decline in student numbers studying geography in schools, a lack of qualified geography teachers, or a minimal involvement of academic geographers in developing school geography, has a direct impact on the number and quality of geography applicants to universities (Butt 2008, Castree 2011). However, it is important to recognise that the priorities of geography educators in the two sectors will always be asymmetrical - the prime focus of the work of geographers in schools and universities *is* different, as is their take

on what their subject is for and what content it should contain. As Castree reminds us, teachers 'often present a very different sort of geography to that most university academics teach' (Castree, 2011, p. 3). Nonetheless, for the continuing health of the subject there should always be conceptual and disciplinary connections between the two – not just borne from mutual needs, but reflective of the imperative to 'think geographically' (Morgan 2018) and to recognise the contested and changing nature of the discipline. Essentially, these connections are neither:

> 'to create uniformity, nor an overly regimented continuity and progression of geographical themes, but to achieve a mutual, coherent and agreed understanding of the subject, recognisable by both sectors' (Butt and Collins 2018, p.271).

<b> The popularity of geography

At the time of writing (January 2018) geography is a popular subject in schools in England. Students are examined by two 'high stakes' public examinations if they opt to study, and to be assessed, in geography – the General Certificate of Secondary Education (GCSE), usually at 16 years of age; and the advanced Level ('A' level), usually at 18 years of age[1]. Geography GCSE entries are currently at their highest for 16 years, reflecting continued growth for six consecutive years - some 245,964 students sat geography GCSE in England, Wales and Northern Ireland in 2017. This increase is partly policy driven - with recent governments insisting that all students who wish to gain an English Baccalaureate (EBacc), which consists of gaining high grades in a suite of five selected GCSE subjects, must include either Geography or History GCSE in their examination portfolio. Geography 'A' Level numbers are similarly at their highest levels in England, Wales and Northern Ireland for over 17 years, at 37,814 entries in 2017. This makes both GCSE and 'A' level geography the 8th most popular subjects for these examinations. Recent reforms of public examinations have affected geography education in schools and higher education – these changes have been 'knowledge-led', following government insistence that school subjects should contain greater disciplinary content; a result of syllabus reforms which have benefitted from the significant involvement of academic geographers. From 2014, the 'A' Level Content Advisory Board (ALCAB) – which included academic geographers and representatives both from the Geographical Association (GA) and Royal Geographical Society with Institute of British Geographers (RGS-IBG) – helped revise the geography content of 'A' and 'AS' level syllabuses. This has led to a reconnection, at least to some extent, of the content of geography studied in 'A' levels and in undergraduate geography courses (Evans 2015).

The greater involvement of university academics in the curriculum development process in schools is certainly welcomed. Butt (1997) and Morgan (2008) have noted the previously limited engagement of academic geographers in the creation of the first Geography National Curriculum (GNC) in the early 1990s – just two were chosen to sit on the Geography Working Group (GWG), few made significant submissions to the curriculum-making process, and only modest numbers engaged in lobbying either their professional associations, or the GWG. From the late 1990s, until very recently, few academic geographers crossed the school–university divide, resulting in a limited contribution to the creation of geography syllabuses at 'A' level, or to the professional development of teachers. Castree et al (2007) assert that the lack of engagement of academics in the professional development of teachers is perhaps understandable, attributable both to an urgent need to publish high-quality

[1] The 'A' level is an advanced qualification normally taken in secondary schools and colleges in England, Wales and Northern Ireland (the Scottish system is different, where the equivalent qualification is the 'Higher'). Admission to higher education is primarily driven by the results of students' performance in this examination. An Advanced Supplementary ('AS') level examination also exists, examined at 17 years of age. It was previously a requirement that all students studied an 'AS' level before progressing to the full 'A' level, however the de-coupling of these examinations has caused a decline in the numbers sitting 'AS' levels – in geography from 54,866 in 2016, to 27,617 in 2017. This decline is expected to continue, paralleled by a rise in the number of students undertaking Extended Project Qualifications (EPQs).

research for upcoming research assessment exercises and to prepare themselves for high-stakes audits (see Quality Assurance Agency for Higher Education (QAA) Benchmark Statements for Geography (QAA 2014)).

Since 2002 the trend in applications for geography degrees has been steadily, if gently, rising (see Table 1).

[Insert Table 1 about here]

However, figures recently released (November 2017) concerning applicant numbers for undergraduate degrees starting in 2018 – not shown on Table 1 - reveal an alarmingly sharp decrease in applications (of 24% for geography, and 5 % across all other subjects). Even with a predicted 'in year' rise in the number of applicants, the projected annual fall in applications is still expected to be around 20%. This may partly be a consequence of the decline in geography 'AS' numbers - although it is unlikely that large numbers of potential undergraduate applications have been lost by this structural change, especially when other subjects have shown only modest declines. Suggestions that teachers have been under pressure to deliver changes in both GCSE and 'A' level geography courses are certainly true, possibly affecting their capacity to identify and promote potential applicants to geography degrees. It may also be the case that some teachers currently lack confidence in predicting their students' 'A' level grades for the new examinations, making them cautious about suggesting progression to degree level geography. Additionally, 'A' level geography students are increasingly being sought by degree subjects other than geography (such as environmental sciences and biological sciences). Coupled with suggestions that studying geography in university is expensive – primarily due to fieldwork costs – and a lack of clear information in schools about the good employment prospects of most geography graduates, this may be resulting in a reduced uptake from prospective students (particularly those from low income families)[2].

<b> Global reviews

Infrequent and piecemeal global 'reviews' of the state of geography education, including consideration of concerns about student transition from school to university, help to present a comparative perspective across different jurisdictions (Rawling 2004, Lidstone and Williams 2006, Butt and Lambert 2014). But the outcomes of such reviews need to be handled with caution. Geography, as a school subject, is expressed in a wide variety of ways - state and private education sectors often differ in how they teach the subject, while national and regional organisational structures for curricula vary (from national curricula, national standards, or state programmes, to more liberal approaches to the curriculum and its development). In short, the political, cultural, social and philosophical traditions of different countries - and of their education systems - affect how they value and represent geography as a subject in schools and universities. This makes comparisons across jurisdictions 'hazardous' (Butt and Lambert 2014, p.1). Unfortunately, descriptions of 'who teaches what' in different national settings only get our analysis so far, what is arguably more useful is to attempt to identify some universal 'truths' about geography education in schools (we should, perhaps, also be more concerned with identifying commonalities, rather than differences). The challenges to geography education in schools have remained remarkably persistent across different national settings:

[2] Dilnot's (2016, 2017) research focuses on students' choice of 'A' level subjects and its consequent effect on gaining access to high ranking universities, while also considering the socio-economic background of applicants. The reasons why students from lower socio economic groups are under-represented in highly selective universities is not fully understood; interestingly Dilnot identifies geography amongst a group of subjects she labels as 'facilitating' (as opposed to the less advantageous subjects considered either 'useful' or 'less suitable'). Facilitating subjects are those that keep applicants' choices open to the largest number of high quality degree courses.

- uncertain place in the school curriculum, especially within primary education
- erosion of the connections between school and university geography
- shifts in initial teacher education, creating decline in specialist (and specialist trained) geography teachers and reduction in quality of teacher preparation
- assessment and performance led systems, impacting on curriculum development
- need to ensure technological developments are represented in geography curricula
- poor public image/perception of the subject – lack of recognition of subject's potential (among policy makers, employers, parents, students)

We should remember that in whichever sector geography education occurs, the influence of European and American disciplinary traditions remains remarkably strong across both the 'developed' and 'developing' worlds - affecting the content taught and the ways in which it is taught, including consideration of the important balance of teaching disciplinary themes and skills.

<b> Experiences of transition

The experiences of students making the transition from schools to universities is reasonably well researched and evidenced. Here the impacts on students of shifts in subject content in England, typically from 'A' level[3] to undergraduate studies, may not be as significant as previously thought; for example, Tate and Swords (2013), report that concerns about content change mainly link to areas of subject content that students had limited, or no, previous experience of in schools (such as cultural geography, radical geography and social geography). Greater impact was felt with regard to the introduction of new skill sets and pedagogy – such as the ability to engage in deeper and more critical thinking, to write well in an extended form, and to carry out certain practical, independent fieldwork tasks.

With recent changes in the specifications of many 'A' level subjects since 2016, the experiences of transition to higher education reported by students will inevitably shift. Changes in the subject content of syllabuses, and in the ways in which students are taught and assessed – with all geography 'A' levels moving to linear syllabuses and assessment, compared to the previous dominance of modular approaches – alter the ways in which students make the transition to degree level work. The adjustment of assessment methods is paralleled by changes in the assessment objectives stated for 'A' levels, which arguably now move closer to the expectations of skills and abilities promoted at undergraduate level. For example, the previous emphasis on recall, criticality and synthesis at 'A' level is now extended, raising expectations that students can create stronger narratives, and can devise and present multi-faceted and multi-layered arguments. However, as Finn (2017) points out, these changes will have only 'limited value if school teachers, examiners and university lecturers all mean different things' when referring to the skills of evaluation and constructing arguments.

Interestingly, and almost certainly as a result of the greater involvement of academic geographers in the revision of 'A' levels, some of the content areas reported by first year undergraduate students as 'previously lacking' in their school geography education have now been introduced into the new 'A' level syllabuses. This should make transitions easier with respect to continuity and progression. Unfortunately, even with a clearly defined 'core content' in the new geography 'A' levels, it is still difficult to predict exactly where the 'pinch points' might be for new undergraduates. There exists a range of 'A' level geography syllabuses that schools can chose from, and within these there are numerous options for study – therefore no two university applicants are exactly the same with respect to their coverage of geography content at the point of university entrance. Just as previously, some

[3] We should also be aware that students may gain admission to geography degree courses on the strength of their performance in International Baccalaureate (IB) examinations, or even through vocational routes.

students will find their experience of the first year of university work familiar (or indeed, in some cases, repetitive), whereas others will be 'breaking new ground' intellectually from week one. Finn (2017) notes that many geography 'A' levels now adopt the use of a 'systems' approach in their presentation of physical and human geography themes – this will aid student transition to some university geography courses, but not all, depending on the extent to which such an approach is adopted in their first year studies.

Changes in school geography curricula should definitely include *some* of the changes from the academic frontiers of the subject. In the past this process has often been mediated by teacher educators in university education departments (for example, through the Schools Council geography curriculum development projects of the 1970s and 80s). Although curriculum development projects often encourage a heightened focus on academic geography they also tend to incorporate (and valued highly) the application of innovative curriculum and pedagogical theory. Shifts in university-based geography have often proved confusing for school geographers - with (some) recent ideas eventually working their ways into (some) schools, but with much new content being deemed inappropriate, even for advanced level teaching. Teachers tend to be conservative about changing syllabuses, mindful of their own professional accountability - which is primarily determined by their students' performance in high stakes, public examinations. Combined with harsh inspection regimes, the publication of examination performance 'league tables', the prioritising of assessment data, and career progression being based largely on results, no wonder teachers tend to be risk averse with respect to curriculum change.

It is thought-provoking to consider how 'gap avoidance' might be made easier. As we have seen, the solutions are not as straightforward as simply 'filtering down' selected content, themes and skills from first year geography undergraduate courses to 'A' level syllabuses. Undergraduate students do not necessarily see content shifts as presenting significant problems - they don't expect the transition from 'A' level to degree level to be seamless and have a realistic appreciation of continuity and progression. The greater disparity, and potential upset, appears to be in relation to skills, not content – what Marriott (2007) refers to as a 'sharp discontinuity' (p.49) between school and university-level study. Undergraduate students, according to Tate and Swords (2013), often identify a perceived gap in their own practical, cognitive and critical thinking skills. These skills may relate to fieldwork, IT (particularly GIS) and laboratory work, as well as to their criticality, argumentation and evaluation skills. In essence, many undergraduates describe a dawning realisation that they are now expected to show greater originality and independence of thought than was required of them at 'A' level. Simply accepting a set of (so called) 'facts' – or adopting an uncomplicated 'map' of geography, as conveniently provided by a single text book (Bryson 1997) – is soon recognised as unacceptable. The need to engage with a *range* of sources, often contradictory in nature, including journal articles, research reports, papers and books is a revelation to some students. In the words of Morrison and Collins (1996), undergraduate students need to develop greater 'epistemic fluency' – to be aware of the different ways in which they are learning, and to nurture the ability to think through perspectives other than their own. The very nature of disciplinary geography in higher education – research driven and contested, as opposed to teaching focused and defined – shifts students from a previously comfortable, modernist 'take' on their subject into more challenging, postmodern and increasingly inter disciplinary approaches.

But we must remind ourselves that the primary purpose of 'A' level study in geography (and indeed in all other subjects) is not simply to select students for university geography courses – the vast majority of 'A' level geographers will never take a geography, or even a geography-related, degree. 'A' levels serve a broader purpose than merely providing a means of identifying potential candidates for higher education. Structurally they are also more rigid, static, politicised and slow to change compared with what are often more flexible university courses.

<c>Overcoming transition problems and reducing the gap.

We may recognise that striving to bridge the persistent gap between geography education in schools and universities – sometimes described as a 'chasm', 'border' or 'discontinuity' (see Machon and Ranger, 1996; Bradford, 1996; Marsden, 1997; Bonnett, 2003; Butt, 2008; Hill and Jones, 2010) – is desirable, but not necessarily achievable, given the conflicting aims of the two sectors. Nonetheless, we must recognise that there are mutual advantages in attempting to do so.

Table 2 indicates ways in which academic geographers, initial teacher educators, professional associations, awarding bodies and geography teachers might reduce the gap between school and university geography (see also Fereirra 2018). There are overlaps between many of the suggested 'activities' and 'agents' – the key to success lies in establishing stronger, more frequent and clearer lines of communication between the sectors. This is often mediated by the actions of particular 'ambassadors' interested in the development of geography content and pedagogy. Maintaining a dialogue between school teachers and university academics is mutually beneficial, but this should avoid being either paternalistic, or one-sided.

Table 2 Bridging the divide – updating the content of school geography

activity	*agents*
Professional development conferences and events	Professional associations (e.g. GA and GA branches RGS-IBG and GA conferences)
Academic conferences and events	Academic geographers and initial teacher educators (with some geography teachers) (e.g. COBRIG association of American Geographers Conference, IGU ESRC 'Engaging Geographies' seminar series, RGS-IBG and Ga conferences)
Producing textbooks/journal articles for school students/geography teachers	Geography teachers, academic geographers and/or initial teacher educators (in schools and universities) (e.g. *Teaching Geography, Geography Review, Geography)*
Producing scholarly/research texts	Academic geographers and/or initial teacher educators (in schools and universities) (e.g. GEReCo, Rawling and Daugherty (1996), Kent (2000), Butt (2011))
Research projects	Geography teachers in association with academic geographers and/or initial teacher educators (in schools and universities) (e.g. Young People's Geographies Project)
Curriculum Development Projects	Notably subject associations (e.g. see under 'projects on geography.org.uk
'Mediation'	'Mediators' and 'ambassadors' working in/with geographers in schools (e.g. GA Chief Executive/Professor of Geography Education; RGS-IBG subject officers; key geography academics; initial teacher educators in geography; geography undergraduates in schools; a level geography students attending day 'outreach/widening participation' courses in university geography departments).
Special Interest Groups	As represented in professional associations (IGU, GA RGS-IBG, etc.)

Political lobbying for government funded initiatives	Professional associations (GA, RGS-IBG) (e.g. Actior Plan for Geography); 'mediators'
Award bearing courses/CPD (Masters Ed D, PhD in geography education)	University Schools of Education
Initial Teacher Education	New geography teachers, with geography educators (e.g. PGCE and PGDipEd courses)
Development and review of examination specifications[1]	Awarding bodies in association with academic geographers, teacher educators and geography teachers. ALCAB.

(Butt and Collins 2018)

[1] We cannot escape the sustained influence of the awarding bodies on the content of geography taught in schools. Many geography teachers express a desire to include up-to-date research in their teaching and may be encouraged to do so by their choice of syllabus. However, most teachers will only teach content which they believe will be credited by the examiners, who may favour 'traditional' (and possibly outdated) answers.

With respect to the gap in content between schools and universities Lambert (2011), and Mitchell and Lambert (2015), have argued for teachers to re-focus their attention on geographical knowledge. The erosion of geographical knowledge in schools has occurred as a result of a previous overemphasis on pedagogy, on the rise of so called 'moral' and 'ethical' geography (Standish 2009), on 'therapeutic education' (Ecclestone and Hayes 2009) and on the use of geography as a vehicle to deliver aspects of numeracy, literacy, transferable skills, and citizenship. The extent to which concerns about pedagogy have come to dominate knowledge has now been recognised and partly reversed. As Peter Jackson (2006) asserts, we must stress that 'thinking geographically' - allowing one to apply geographical knowledge and conceptual understanding to different settings - is a uniquely powerful way for students to understand the world. To think geographically one must first have geographical knowledge.

The traditional importance of initial teacher education (ITE) in helping to 'bridge the gap' is also significant. ITE has itself experienced accelerating, radical shifts in form, structure, content and location (both physically and intellectually) since the mid 1990s. University-led teacher education has largely been replaced by school-based training, affecting the quality of teacher preparation and the development of geography curricula development (Butt 2015). The role of the specialist geography educator in HEIs is disappearing, leading to narrower forms of teacher preparation, the loss of subject specialisms, and a reduction in the quality of geographical knowledge experienced by students in schools (Butt and Collins 2018, Tapsfield, Roberts and Kinder 2015). Each trainee teacher, regardless of their subject, must make their own bridge between university and school knowledge sets. Each must strive to translate or transform their knowledge, understanding and skills from the lecture theatre to the classroom. Essentially ITE students acts as conduits, bringing aspects of recently acquired geography content from their university courses into schools – a process mediated by specialist, university-based, teacher educators and school mentors. The shortage of geography teachers in secondary schools - as a consequence of a burgeoning teacher 'recruitment and retention' crisis in the UK - has led the Department for Education (DfE) to devise enrolment initiatives, such as financially supporting geography graduates (and other teachers of 'shortage subjects') and offering scholarships for teacher training and development through the RGS-IBG.

An innovative approach to 'bridging the gap' between schools and universities comes in the form of University Training Schools (UTSs) in England. Currently only two exist, both of which opened in 2015 following substantial investment from central government and their university sponsors - the University of Cambridge (which sponsors a primary school) and the University of Birmingham (a secondary school). The University of Birmingham School – an entirely new school, housed in purpose built accommodation – has worked closely with the parent university's academic departments and subject specialists from their School of Education to recruit staff who are already considered to be 'research active' and 'research informed'. All Heads of Department in the school must possess a Masters level qualification, while other staff are expected to maintain close links with university academics. The aims of the UTS include enabling teachers to engage with, and undertake, their own educational research, to foster projects with academics and their subject departments, and to make knowledge creation a focus for ITE.

<b> Conclusions

The 'gap' between geography in the school and university sectors is not simply one of content but also – perhaps more importantly from the students' perspective – one of skills. As such, bridging this divide does not simply involve negotiating a shift in content, but also responding to changes in pedagogy, academic expectations and life course.

The variation between the aims, rationale and endeavours of school and academic geography educators is readily apparent, particularly with regard to the priorities they afford to teaching and research. University geography moves forward in innovative, experimental, tentative and uncertain ways – this is 'part and parcel' of the manner in which academic research advances the very boundaries of disciplinary thinking. Research is inherently messy: a 'backwards and forwards' process that is uncertain, time consuming, expensive and tentative. Teaching in schools is a very different endeavour. It would be impossible for schools to function in the ways in which universities function; the aims of schools closely align with the teaching and learning of their curricular subjects, not with the advancement of disciplinary research. Hence the geography taught in schools is *informed* by knowledge gains achieved by academic geographers, but it rarely contributes to this process and its subject content must be more stable, enduring and certain than that of the academic discipline. School geography cannot, and should not, seek to replicate disciplinary content that has recently been culled from the frontiers of academic research. This is not to say that the two sectors should therefore be allowed to drift apart – they must regularly debate their relationship, whilst acknowledging that the expectations of both sectors are inherently different.

Changes in syllabus content and assessment regimes at 'A' level require significant professional development for geography educators, which is often provided for teachers by the 'A' level awarding bodies. Finn (2017) highlights how this process relates to the introduction of new curricular content, with teachers requiring professional development in conceptual areas they may not have previously studied - such as 'identity and belonging and place-making' - or which require a greater emphasis on quantitative approaches. We may be approaching a time when the gap between school and university geography is narrowing, as changes to 'A' level geography specifications serve to 'enhance the continuities and reduce the gaps between school and university geography, excepting the reframing around a systems approach' (Finn 2017). But, in order to bridge these gaps successfully, certain conditions must be recognised and confronted:

> 'teachers will only be able to make worthwhile contributions to curriculum construction with appropriate professional training and development. Here the contributions of academic geographers are widely valued and thought, in most jurisdictions, to be essential. After all, school subjects that become disconnected from the disciplinary knowledge-creating communities in universities would soon lack legitimacy' (Butt and Lambert 2014 p.10).

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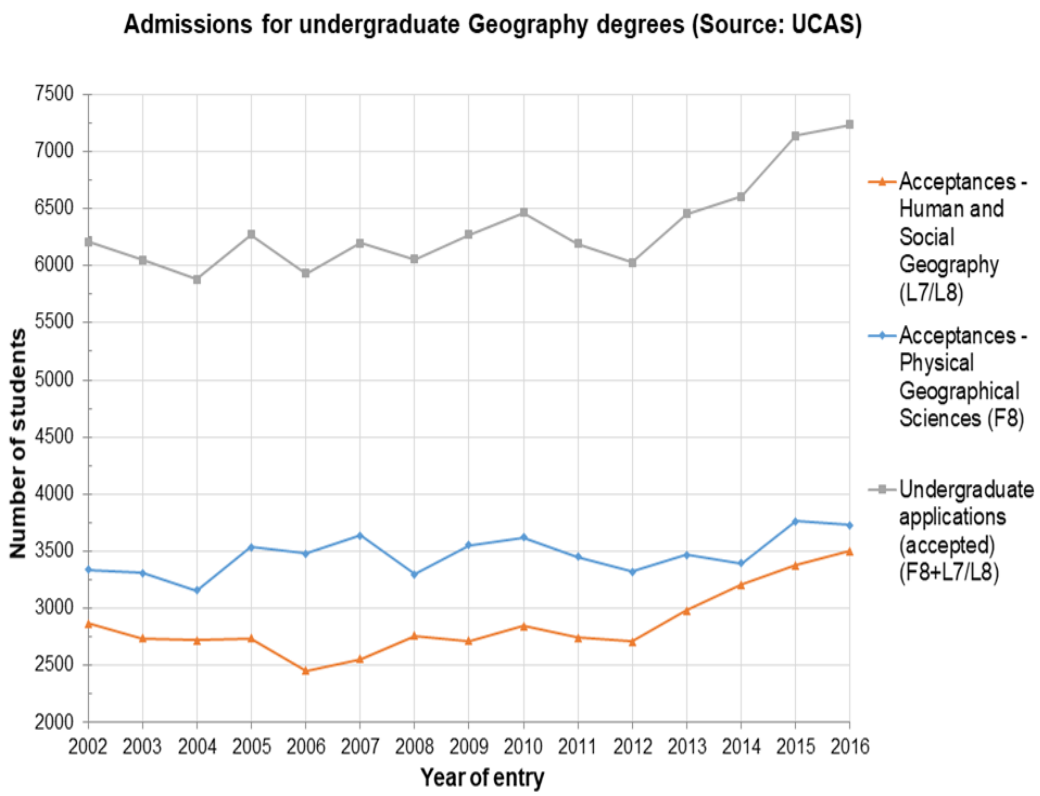

Table 1: Figures are for UK admissions

The total number of undergraduate students (2015 the last time we got subject level data) --- 22850 (F8 and L7)